REMARKS/ARGUMENTS:

Claims 1-53 are pending in the subject application. In an Office Action dated June 28, 2004, the Examiner finally rejected all claims under 35 U.S.C. § 103(a) as being unpatentable over Middleton (WO 00/70770) in view of Chambers, IV (U.S. 5,426,779). In response, the Applicant has amended each of independent claims 1, 7, 16, 27 and 41 to recite a plurality of look-up strings each containing an index-instruction pair, wherein the clause "index-instruction pair" is added by this paper. Support for this amendment may be found in the application at least at paragraph [0026], [0033], and within each of Figures 13-15B and their supporting text.

The present invention relates to a compressed data structure and decompression system suitable for use in portable devices. According to embodiments of the invention, the data structure includes code strings and look-up strings. Each of the look-up strings includes an index that identifies a code string, and an instruction identifying an operation to be performed on the retrieved code string, which in the amended independent claims are recited as index-instruction pairs. During the decompressing procedure, for each look-up string a code string is retrieved and an operation is performed on that code string according to the look-up string. The output of this operation is written to an output memory for later use.

The compressed data structure may be organized as look-up data and library data. The library data includes a number of entries each being a repeated code string. The entries are organized and indexed so that the most frequently repeated words are represented with the fewest bits and the least frequently repeated words are presented with more bits. This minimizes the size of the compressed file.

In contrast, Middleton generally describes a compression/decompression method for compressing web pages. In this method, data of a web page is compressed for sending purposes. Middleton also describes a type a "cleaning method" that modifies specific definitions to a more simplified form requiring less space. HTML or equivalent code is searched for certain mark strings, which are replaced with further strings in order to compress

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the data.

As such, Middleton merely teaches replacing the "cleaned" code strings with the original ones. As the Examiner concedes at page 3 of the Office Action, Middleton does not teach or suggest an index identifying a particular code string to be retrieved and an instruction identifying an operation to be performed on the retrieved code string. Moreover, Middleton does not disclose or suggest cache or data structure.

Chambers, IV teaches a method and system for compressing/decompressing data. The method and system of Chambers, IV relate to finding a target string and replacing it with a string that is written to a look-up table. Compression occurs when the long strings, which are repeating in the data structure, are replaced with shorter ones and these pairs are saved. In the decompression procedure, the look-up table is used to pick up the original string for each string in the compressed data and the original one is written to the decompressed file. This general approach is well known and thus Chambers, IV focuses on a technique of finding the strings and replacing them. In particular, this reference teaches an algorithm or logic for completing the compression. Applicants respectfully assert that the forgoing does not disclose or suggest to one of ordinary skill in the art that which is set forth in the present claims.

Specifically, Chambers, IV, is not seen to teach or suggest a look-up string that is an index-instruction pair, where the index identifies a code string and the instruction identifies an operation to be performed on the code string that is identified by the index. Middleton also fails to teach or suggest this aspect, a point on which the Examiner has agreed. It is therefore contended that no combination of Middleton and Chambers, IV, make obvious the claims as amended, even if combined in the manner asserted in the final rejection, because not all elements of the claim are fairly within the references as required under M.P.E.P. § 2143.03.

The Examiner appears to recite at pages 3-4 of the Office Action that the data pairs of Chambers, IV, anticipate or make obvious the index-instruction pair of the look-up string.
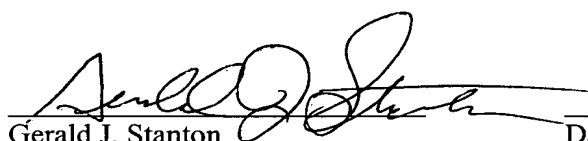
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However, such a modification to Chambers, IV, would appear to change the Chambers, IV, principle of operation in violation of M.P.E.P. § 2143.01. The overall compression scheme of Chambers, IV, is to replace longer data strings with shorter ones. The association between original long strings and replacement shorter strings is preserved as the Chambers, IV, data pairs, for later use in decompression. There appears no instruction in these data pairs, but rather a one-to-one correspondence between the strings so that the original long data string may be retrieved based on its correspondence via the data pair with the shorter string. The one-for-one string replacement in Chambers, IV, cannot make obvious the "instruction" of the claims for two reasons. First, to do so is to read the "instruction" element out of the claim; an instruction must somehow instruct as to which of several options are to be executed. Second and related to the first, there is no provision fairly within Chambers, IV, to do anything other than replace one string identified by a data pair with its partner identified by the same data pair. An instruction directs as to one of several choices; replacing one data string of a data pair with its partner identified in the same data pair appears the only option for all instances of Chambers, IV.

Applicants again respectfully point out that the present invention is also concerned with processing power and thus decreasing power consumption of a CPU. Middleton and Chambers, however, do not consider CPU power consumption but rather merely go through a whole data structure string by string and replace where appropriate. Applicants respectfully assert that one skilled in the art seeking to develop that which is presently claimed would not be motivated to look to these references for guidance, let alone combine these references and then modify their teachings. Said another way, the combination of the references would not lead to the present invention, but to some other technique that included a complete data structure search as each proceeds from that premise. It is respectfully suggested that the Examiner has fallen subject to insidious hindsight in concluding obviousness: that the references are both in the field of data compression may allow them to be combined, but does not motive their combination to achieve an index-instruction pair. Accordingly, Applicants respectfully assert that the Examiner's obviousness rejection should be reconsidered and withdrawn.

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The Applicant respectfully requests that this amendment be entered, and the rejections over the cited references be withdrawn in light of the above arguments and amendments. Accordingly, the Examiner is respectfully requested to allow all of the pending claims as currently presented. The undersigned remains available to discuss any remaining matters via telephone, at the Examiner's discretion.

Respectfully submitted:

_____   _____August 30, 2004_____
Gerald J. Stanton   Date
Reg. No.: 46,008

Customer No.: 29683

HARRINGTON & SMITH, LLP
4 Research Drive
Shelton, CT 06484-6212
Telephone: (203)925-9400
Facsimile: (203)944-0245
email: GStanton@hspatent.com

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____August 30, 2004____   _____
Date   Ann Okrentowich

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